

Application No. 09/918,117
Amendment dated December 9, 2004
Reply to Office Action of October 1, 2004

REMARKS

Claim 13 is pending in the application; the status of the claim is as follows:

Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-278287 to Oya (hereinafter "Oya"), in view of U.S. Patent No. 6,499,753 B2 to Irvine et al. (hereinafter "Irvine").

Claim 13 has been amended to further clarify the claimed invention.

35 U.S.C. § 103(a) Rejection

The rejection of claim 13 under 35 U.S.C. § 103(a), as being unpatentable over the Oya publication, in view of the Irvine patent, is respectfully traversed based on the following.

Oya shows the formation of rack teeth 11 in a tubular body. A metal sheet 1 is bent in a U-shaped body 10 and the rack teeth are formed at the apex of the U shape. The opposing sidewalls are then bent to form the tubular body. In Irvine, a rack shaft 14 is formed with gear teeth 88 that are wider than the diameter of the shaft. "The rack and pinion steering system 10 ... has a wider gear rack teeth 88 relative to the rack diameter." (column 4, lines 20-22) Of importance, the bearing surface 76 has a constant radius that is equal to that of the cylindrical end 66 of the shaft that does not bear teeth. With the exception of the rack teeth, the entire rack shaft 14 has a uniform radius.

In contrast to the cited references, claim 13 includes:

wherein, in said first area, the row of rack teeth and a semi-cylindrical part on a reverse side of the row of rack teeth are formed; and

in said second area, a respective complete cylindrical part coaxial with said semi-cylindrical part is formed and has an outer diameter smaller than an outer diameter of the semi-cylindrical part in said first area.

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Oya shows a shaft having a constant diameter. Therefore, Oya does not show or suggest a "second area" having "an outer diameter smaller than an outer diameter of the semi-cylindrical part in said first area." Similarly, Irvine shows cylindrical portions 66 and 104 having the same diameter as the bearing surface 76, which is on the reverse side of the rack teeth. That Irvine shows a rack shaft having a constant diameter throughout (with an extended area to support the rack teeth) is most clearly shown in figures 4 and 8. Therefore, Irvine also does not show or suggest "second area" having "an outer diameter smaller than an outer diameter of the semi-cylindrical part in said first area."

To support a *prima facie* case for obviousness, the combined references must show or suggest every limitation of the claim. MPEP §2143.03. As noted above, none of the cited references shows or suggests a semi-cylindrical part on the reverse side of the rack teeth that has a larger diameter than at least one completely cylindrical part of the rack shaft. Therefore, claim 13 is not obvious over the cited references.

Accordingly, it is respectfully requested that the rejection of claim 13 under 35 U.S.C. § 103(a) as being unpatentable over the Oya publication, in view of the Irvine patent, be reconsidered and withdrawn.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a

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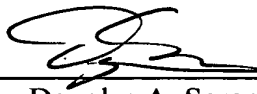
fee, other than the issue fee, is due, please charge this fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

Any fee required by this document other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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